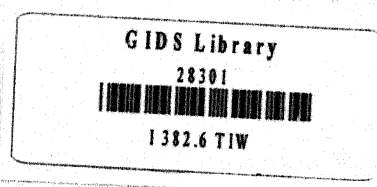# EXPORT GROWTH, INTERNAL EXPORT EFFICIENCY AND POLICY RESPONSES : THE INDIAN CASE

R. S. Tiwari

INSTITUTE OF DEVELOPMENT STUDIES

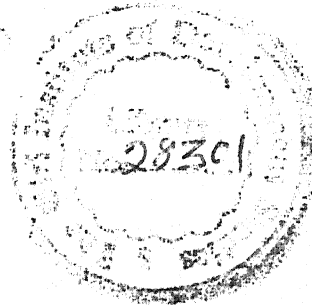Sector O, Aliganj Housing Scheme
LUCKNOW-226 024

1998

EXPORT GROWTH, INTERNAL EXPORT EFFICIENCY AND POLICY RESPONSES: THE INDIAN CASE

R.S. TIWARI

GIRI INSTITUTE OF DEVELOPMENT STUDIES
Sector O, Aliganj Housing Scheme
LUCKNOW 226 024 (U.P.)

1998

EXPORT GROWTH, INTERNAL EXPORT EFFICIENCY AND POLICY RESPONSES: THE INDIAN CASE*

R.S. TIWARI

I. Introduction

India, as a developing country, set out a planning process in 1950 for achieving economic growth with self-reliance. In the Indian context, self-liance did not imply autarky, but it was intended to be a pragmatic approach in which both import-substitution and export-promotion were to play a complementary role. The initial thrust especially during the Second and Third Five Year Plans was on pursuing an inward orientation strategy of giving priorities to the development of basic and heavy industries and progressive substitution of imports by domestic production through the regulation of trade. It was but soon realised that import-substitution programme not only entailed higher domestic

resource costs[1] but also increased the dependency on the capitalist world.[2] Overtime, the stress on import-substitution was reduced and emphasis began to be placed on exports. Indeed, there was no explicit recognition of an export-led growth strategy; yet some important shifts in industrial policies and programmes did reflect a bias in the Indian policy frame, whereby export expansion came to be regarded as critical factor in India's economic development. Under the various export promoting programmes, India's export indeed increased, but it was not enough to meet the country's industrialisation process. Several studies, incorporating sophisticated econometric models also underlined the poor performance of India's export. Most common characteristics of such studies were that these over-emphasised external demand factors, which, by and large, left internal supply factors of export-country unexplored. The present paper aims

---

1 Nambiar, R.G., "Import Substitution, Domestic Resource Cost and Key Sectors in the Indian Economy", Economic and Political Weekly, Vol.XII, No.24, June 11, 1977, pp.956-958; Tiwari, R.S., "Constant-Market-Share Analysis of Export Growth : The Indian Case", The Indian Economic Journal, Vol.33, No.3, January-March, 1986, pp.70-80; Ahuja, Shobha, "Liberalization of Trade in Services : The Revealed Comparative Advantage Approach", Foreign Trade Review, Vol.XXVIII, No.1, April-June, 1993, pp.43-46; Manjappa, H.D and Hegde, I.V., "Import-Led Growth-Led Export : A New Trade Development Model for Developing Countries", Indian Economic Journal, Vol.45, No.3, January-March, 1997-98, pp.100-112.

2 Kelker, V.L., "Export-Led Growth and Private Foreign Investment in India : An Evaluation", Anvesak, Vol.VI, No.2, December 1976, p.192; Tiwari, R.S., India's Export Performance, Deep and Deep Publications, New Delhi, 1986, p.11; Lai, E.L.C., "International Intellectual Property Rights Protection and the Rate of Product Innovation", Journal of Development Economics, Vol.55, No.1, February, 1998, pp.135-136.

at contributing the relative significance of internal supply as well as external demand factors on India's export performance.

II. Export Pattern

Analysis of export pattern portrays the movement in exports over time. It compares export pattern in each NICs with other NICs. Table – 1 records the movement in export from 1971 to 1992 at 1987 prices. It was seen that Korea's export shot up by 24.72 times from US $ 2637 million in 1971 to US $ 65,183 million in 1992. Corresponding increase in Turkey was 7.01 times; Singapore 6.57; Malaysia 6; Brazil 5 and Israel and Pakistan to 4 times. As compared to above, the export growth was found to be less spectacular in Argentina and India, which grew by 2.38 and 2.56 times respectively. Export growth in India and Argentina was, however, found to be higher than that in developing countries as a whole, which recorded an increase in export by 1.74 times. Thus, export growth in India has been one of the least significant as compared with most of NICs.

Additional statistical test has also been performed with the help of simple linear regression model, in which export is treated as function of time (y = a + bt). From 1971 to 1981, exprot in India grew by US $ 367.11 mill. annually, which was higher than that in Israel, Turkey and Pakistan, where it grew by us $ 340.71 million, US $ 161.30 million and

Table - 1 : __Export of Newly Industrializing Developing Countries at 1987
Prices : 1971-1992__

(In mill. US $ at 1987 prices)

Year	Argen-tina	Brazil	India	Israel	Korea Rep.	Malay-sia	Paki-stan	Singa-pore	Turkey	Develo-ping count-ries
1971	3893	6541	6548	2308	2637	6139	1919	8478	1612	424685
1972	4002	8195	7339	2808	4101	6239	1837	13380	2425	461679
1973	5064	8945	7383	3142	6582	6623	1439	13726	2727	547445
1974	5085	9614	7361	2687	7252	6254	1360	11019	2396	427930
1975	3845	10946	7739	2718	8143	6702	1611	10841	2206	373370
1976	5041	11130	10011	3430	10974	8312	1760	11996	2816	440238
1977	7053	11181	10452	4222	14048	8138	1513	14162	2435	449278
1978	7594	12787	10231	4996	15989	8721	1715	15959	2922	459923
1979	7465	14287	10666	4897	15911	10105	2113	17485	2390	465788
1980	6838	17601	9599	5212	17431	9999	2374	19184	2847	418644
1981	7670	20748	9156	5543	20813	9961	2531	19707	4769	393493
1982	7304	19727	10273	5405	22273	11314	2387	20998	6566	372742
1983	7015	22813	10494	5360	25615	13080	3069	22695	6613	381750
1984	7397	27893	10683	6273	30340	14744	2689	25241	8562	405437
1985	8288	28829	10470	6896	32319	15401	3071	24718	9982	392477
1986	7071	23329	11272	7700	37679	16743	3850	27087	8501	481351
1987	6360	26225	12888	8475	47172	17911	4178	28592	10190	508000
1988	7293	30765	12282	8425	53430	20555	4610	37989	10789	578800
1989	9415	31627	15494	8850	52295	23903	5052	42075	9920	609733
1990	9035	29180	14735	9170	54854	26244	5734	45922	9614	612194
1991	9093	30601	15172	9012	60128	31410	7104	51506	10361	695629
1992	9269	34573	16799	9839	65183	36311	8190	55699	11302	739161

Source : __World Tables__, World Bank, Various issues.

to US $ 71.29 million respectively. Also, export-growth in India exceeded to that of developing countries, which portrayed a deceleration. However, export growth in India was found to be lower than that in rest of NICs (Table-2).

Table - 2 : Export Function of Newly Industrializing Developing Countries With Time at 1987 Prices : 1971-1992

Regression Equation : $y = a + bt$

$y = $ Export in mill US \$ 1987 = 100

Sl. No.	Country	Period	Constant term (a)	Regression coefficient (b)	T = Values	R^2 = Values	F = Statistics
1.	Argentina	1971-81	3286.84	415.07*	5.57	0.78*	31.91
		1981-92	4676.20	194.84*	2.81	0.44*	7.86
		1971-92	4225.78	228.55*	7.62	0.74*	56.92
2.	Brazil	1971-81	4850.24	1191.99*	8.60	0.89*	72.82
		1981-92	5609.45	1282.81*	4.85	0.70*	23.33
		1971-92	4009.06	1361.21*	16.43	0.93*	265.71
3.	India	1971-81	6568.71	367.11*	4.07	0.65*	16.71
		1981-92	2562.26	545.31***	1.73	0.23***	2.99
		1971-92	6562.38	322.82*	3.42	0.37*	11.75
4.	Israel	1971-81	1761.47	340.71*	9.04	0.90*	81.00
		1981-92	388.46	435.79*	12.83	0.94*	156.67
		1971-92	1537.36	369.35*	25.09	0.97*	646.67
5.	Korea Republic	1971-81	-314.42	1777.87*	5.50	0.77*	30.13
		1981-92	-28314.30	4251.88*	20.10	0.98*	490.00
		1971-92	-7987.79	3047.04*	17.57	0.94*	313.33

Table-V.2 Contd..

Sl. No.	Country	Period	Constant term (a)	Regression coefficient (b)	T = Values	R² = Values	F = Statistics
6.	Malaysia	1971-81	5146.67	463.33*	9.35	0.91*	91.00
		1981-92	-16276.10	2186.32*	11.19	0.93*	132.86
		1971-92	323.61	1216.16*	10.34	0.84*	105.00
7.	Pakistan	1971-81	1406.07	71.29**	2.43	0.39**	5.75
		1981-92	-3711.58	489.92*	9.32	0.90*	90.00
		1971-92	192.55	260.36*	8.60	0.79*	75.24
8.	Singapore	1971-81	8512.15	943.99*	5.34	0.76*	28.50
		1981-92	-21782.90	3351.61*	11.01	0.92*	115.00
		1971-92	1794.05	1972.29*	11.20	0.86*	122.86
9.	Turkey	1971-81	1718.11	161.30**	2.81	0.47**	7.98
		1981-92	973.54	482.26*	5.60	0.76*	31.67
		1971-92	-8.18	522.23*	12.51	0.89*	161.82
10.	Developing Countries	1971-81	465670.80	-3937.97	-0.90	0.08	0.78
		1981-92	-58569.60	34715.16*	11.10	0.92*	115.00
		1971-92	368844.70	9980.88*	3.54	0.39*	12.79

```
*       Indicates significant at  1 per cent level.
**      Indicates significant at  5 per cent level.
***     Indicates significant at 10 per cent level.
```

Source: <u>World Tables</u>, World Bank, Various issues.

From the period 1981-92, some improvement was recorded in India's export growth. Export growth in India was found to be relatively higher than that in Argentina, Israel, Pakistan and Turkey, whereas, lower considerably than that in Brazil, Korea Republic, Malaysia, Singapore and the developing countries as a whole. Over the long period from 1971 to 1992, India recorded growth in her export by US $ 322.82 million per annum, which was higher than that of US $ 228.55 million in Argentina and that of US $ 260.36 million in Pakistan. Growth in India's export was, however, found to be lower than that in Brazil, Israel, Korea Republic, Malaysia, Singapore, Turkey and the developing countries (Table-2).

To prove this, further statistical test has also been carried out by fitting the semi-logarithemic regression function (Log y = a + bt) to test the relationship of export growth with time. Statistically reliable result showed that India's export grew by 4 per cent from 1971-81, which was just equal to that of Pakistan, but considerably lower than that of Korea Republic and Malaysia (19 per cent), Brazil (10 per cent), Israel (9 per cent), Argentina and Singapore (7 per cent) and Turkey (6 per cent). For the remaining periods, no conclusive inferences could be drawn as regression coefficients were found to be statistically nonsignificant (Table-3). General findings, thus, underlines the poor performance of export in India from 1971 to 1992, although some quantitative achievements have been accorded

Table-3 <u>Trends in Export Performance in Newly Industrializing</u>
<u>Developing Countries at 1987 Prices : 1971 – 1992</u>

Regression Equation : Log y = a + bt

y = Export in mill. US. $ 1987 = 100

Sl. No.	Country	Period	Constant term (a)	Regression coeffici-ent (b)	T = Values	R^2 = Values	F = Statis-tics
1.	Argentina	1971–81	8.18	0.07*	5.36	0.76*	28.50
		1981–92	8.58	0.02**	2.64	0.41**	6.95
		1971–92	8.38	0.04*	7.10	0.72*	51.43
2.	Brazil	1971–81	8.75	0.10*	13.23	0.93*	132.86
		1981–92	9.31	0.05*	4.19	0.64*	17.78
		1971–92	8.88	0.08*	16.82	0.93*	265.71
3.	India	1971–81	8.80	0.04*	4.34	0.68*	19.13
		1981–92	8.75	0.03	0.49	0.02	0.20
		1971–92	8.91	0.02	1.23	0.07	1.51
4.	Israel	1971–81	7.66	0.09*	8.94	0.90*	81.00
		1981–92	7.92	0.06*	10.94	0.92*	115.00
		1971–92	7.77	0.07*	20.58	0.95*	380.00
5.	Korea Republic	1971–81	7.80	0.19**	2.68	0.44**	7.07
		1981–92	8.77	0.11*	16.52	0.96*	240.00
		1971–92	8.04	0.15*	8.72	0.79*	75.24

Table — 3 Contd..

Sl. No.	Country	Period	Constant term (a)	Regression coefficient (b)	T = Values	R^2 = Values	F = Statistics
6.	Malaysia	1971—81	7.80	0.19**	2.68	0.44**	7.07
		1981—92	8.77	0.11*	16.52	0.96*	241.00
		1971—92	8.04	0.15*	8.72	0.79**	75.24
7.	Pakistan	1971—81	7.28	0.04**	2.25	0.36**	5.06
		1981—92	6.48	0.11*	14.58	0.96*	240.00
		1971—92	7.03	0.08*	12.50	0.89*	161.82
8.	Singapore	1971—81	9.13	0.07*	4.94	0.73*	24.33
		1981—92	8.72	0.10*	15.86	0.96*	240.00
		1971—92	9.04	0.08*	19.35	0.94*	313.33
9.	Turkey	1971—81	7.53	0.06*	3.06	0.51*	9.37
		1981—92	8.07	0.06*	5.06	0.72*	25.71
		1971—92	7.36	0.10*	12.49	0.89*	161.82
10.	Developing Countries	1971—81	13.05	−0.01	−0.88	0.08	0.78
		1981—92	12.02	0.07*	11.85	0.93*	132.86
		1971—92	12.86	0.02*	3.29	0.35*	10.77

*   Indicates significant at 1 per cent level.
**   Indicates significant at 5 per cent level.

Source: <u>World Bank Tables</u>, World Bank, Various issues.

from 1981 to 1992. This poses a relevant question as to how far such phenomenon _per se_ is accountable to the cost efficiency and the role of export promoting measures.

III. Cost Structure and Internal Export Efficiency

Cost competitiveness determines the exportability of a commodity in foreign market. Low cost of machinery and equipments, land and building under the fixed cost and the raw materials, transport, marketing, wages and salaries, etc. under the variable cost makes the commodity cost effective and thereby export internationally competitive and vice-versa. The internal cost efficiency by commodities, thus, requires the calculation of fixed and variable components of total cost of production. The principal components of cost as a ratio of output has, therefore, been worked out. Per employee output ratio of material cost to output and the ratio of productive capital to output have been worked out to represent the cost efficiency of a export commodity. The concept of internal export efficiency, however, needs to be understood appropriately. Major determinants of internal export efficiency are the cost of production, export prices, internal government policies, marketing strategy, etc. Thus, products produced at least cost of production, requiring least marketing expences, having competitive export prices and favourable government supports could be considered as efficient export products than those having obverse of such characteristics.

Given the data limitation, it has, however, been not possible to identify internal efficiently export-products on the basis of above criteria. Instead, we considered the percentage share of export in India's export basket as a rough proxy for internal export efficiency. Thus, rising export share implies the improving export efficiency and vice-versa. Increasing share of export of a specific commodity would further indicate the positive role played by various factors, such as, improvement in cost and price competitiveness, marketing strategy, pattern of comparative advantage, etc., where as, reverse could be on account of adverse of above characteristics.

We may now discuss first the extent to which internal efficiency of export-commodity is attributable to the cost structure. This has been examined in terms of employment intensity, material intensity and capital intensity during 1980-81 over 1970-71, 1984-85 over 1980-81 and 1994-95 over 1984-85. A close examination of Table - 4 portrayed a mixed pattern; the internal export efficiency fell down in some products, whereas, improved in others. For example, in 1980-81 over 1970-71, the internal export efficiency has generally deteriorated in (1) food products, (2) beverages and tobacco, (3) jute, hemp and mesta textiles, (4) textiles, (5) paper and paper products, (6) rubber, plastics, petroleum and coal, (7) basic metal and alloys industries, (8) transport equipment and (9) other manufacturing industries. This was found partly the result of comparative material and capital

cost disadvantages in (1) food products and (2) transport and that in (1) beverage and tobacco and (2) other manufacturing industries to the comparative labour cost disadvantages. On the other hand, improved internal export efficiency observed in (1) wood and wood products, (2) leather, (3) chemicals, (4) non-metallic mineral products, (5) metal products, (6) non-electrical machinery and in (7) electrical machinery was found partly to the comparative labour cost advantages.

The pattern of internal export efficiency was found entirely different in 1984-85 over 1980-81. For example, fall in internal export efficiency in (1) beverages and tobacco, (2) jute, hemp and mesta textiles, (3) basic metals and alloys industries, (4) metal products and (5) transport equipment and parts was found partly on account of comparative material cost disadvantages, while in (1) food products, (2) textiles, (3) paper and paper products, (4) non-electrical machinery, (5) electrical machinery and (6) other manufacturing industries to comparative capital cost disadvantages. In contrast to above, improved internal export efficiency in (1) wood and wood products, (2) leather and leather products, (3) rubber, plastics, petroleum and coal, (4) chemicals and (5) non-metallic mineral products was found partly owing to comparative labour cost advantages.

During 1994-95 over 1984-85, the fall in internal export efficiency in (1) food products, (2) jute, hemp and musta textiles, (3) leather and leather and fur products and (4)

non-metallic mineral products is seen on account of comparative capital cost disadvantages, while those in (1) rubber, plastics, petroleum and coal products, (2) basic metal and alloys indutries and in (3) non-electrical machinery mainly due to comparative material cost disadvantage. On the other hand, improved internal export efficiency in (1) beverages and tobacco, (2) textile products (3) wood and wood products, (4) paper and paper products, (5) chemicals, (6) metal products, (7) electrical machinery, (8) transport equipment and (9) other manufacturing industries is found accountable due to comparative labour cost advantages. The finding, thus, underlines the comparative labour cost advantage for the improved internal export efficiency in majority of the products (Table-4).

So as to portray the relationship between the internal export efficiency and cost structure, further statistical test has also been carried out by correlating the export efficiency with cost behaviour. This is performed for 16 commodities for 1970-71, 1980-81, 1984-85 and 1994-95. Table-5 summarises the result of correlation analysis. In 1970-71, the sign of correlation coefficient is found positive between export efficiency and material intensity, whereas, negative relationship has been postulated between export efficiency and capital intensity. Correlation coefficient between export efficiency and employment intensity has, however, been found to be statistically non-significant. In 1980-81, correlation between export

Table - 4 : Percentage Change in Principal Economic Indicators in India's major
Export-Commodities Over Different Points of Time

Sl. No.	Commodities	Percentage change in 1980-81 over 1970-71			
		Export share	Employment intensity (E/O)	Material intensity (M/O)	Capital intensity (C/O)
1.	Food products	-4.87	-34.15	-7.32	-3.85
2.	Beverages and tobacco	-2.76	-0.56	-3.51	-19.44
3.	Jute, hemp and mesta textiles	-60.35	-60.25	-18.33	-59.38
4.	Textile products	-33.42	-66.28	-20.55	-27.58
5.	Wood and wood products, furniture	250.00	-70.23	-31.58	-14.28
6.	Paper and paper products, printing, publishing etc.	-40.00	-70.30	2.00	-9.46
7.	Leather and leather and fur products	6.81	-65.30	-8.86	15.00
8.	Rubber, plastics, petroleum and coal products	-75.46	-82.50	23.88	-59.15
9.	Chemical and chemical products	48.10	-68.42	3.57	-22.22
10.	Non-metallic mineral products	203.79	-67.15	-6.52	-34.48
11.	Basic metal and alloys industries	-57.86	-72.70	--	-32.81
12.	Metal products	52.20	-70.66	-7.81	-23.08
13.	Non-electrical machinery	136.43	-73.65	12.24	-29.23
14.	Electrical machinery	41.90	-71.97	-1.61	-42.31
15.	Transport equipments and parts	-41.25	-71.65	-1.69	1.43
16.	Other manufacturing industries	-41.18	180.00	-9.68	-14.29
	Overall	-10.26	-63.35	-7.05	-22.83

Table - 4 Contd..

Sl. No.	Commodities	Percentage change in 1984-85 over 1980-81			
		Export share	Employment intensity (E/O)	Material intensity (M/O)	Capital intensity (C/O)
1.	Food products	-18.14	-55.56	3.95	4.00
2.	Beverages and tobacco	-27.49	-50.42	3.64	-3.45
3.	Jute, hemp and mesta textiles	-40.85	-34.39	28.57	-46.15
4.	Textile products	-22.04	-26.72	3.45	19.05
5.	Wood and wood products, furniture	71.43	-32.64	21.15	11.90
6.	Paper and paper products, printing, publishing etc.	-42.86	-41.61	--	20.90
7.	Leather and leather and fur products	6.37	-27.27	1.39	-4.35
8.	Rubber, plastics, petroleum and coal products	1918.75	-39.29	1.20	117.24
9.	Chemical and chemical products	17.09	-40.00	1.72	-17.14
10.	Non-metallic mineral products	5.82	-48.54	-6.98	14.04
11.	Basic metal and alloys industries	-49.15	-35.00	5.36	-3.49
12.	Metal products	-38.63	-33.58	5.08	-2.50
13.	Non-electrical machinery	-11.18	-35.71	-1.82	2.17
14.	Electrical machinery	-30.20	-27.27	--	11.11
15.	Transport equipments and parts	-44.52	-38.19	--	-16.90
16.	Other manufacturing industries	-35.00	-35.00	-8.93	-3.70
	Overall	3.34	-34.11	16.95	16.90

Table - 4 Contd..

| | | Percentage change in 1994-95 over 1984-85 | | | |
Sl. No.	Commodities	Export share	Employment intensity (E/O)	Material intensity (M/O)	Capital intensity (C/O)
1.	Food products	-76.35	-75.68	-1.14	15.38
2.	Beverages and tobacco	156.21	-69.39	-5.19	20.00
3.	Jute, hemp and mesta textiles	- 6.45	-63.03	-5.41	114.29
4.	Textile products	130.38	-71.51	5.26	12.24
5.	Wood and wood products, furniture	10.00	-75.24	5.01	11.50
6.	Paper and paper products, printing, publishing etc.	280.00	-78.10	4.11	1.10
7.	Leather and leather and fur products	-86.07	-73.03	3.66	75.00
8.	Rubber, plastics, petroleum and coal products	-83.92	-58.82	-7.69	-28.57
9.	Chemical and chemical products	90.75	-72.22	-7.32	29.31
10.	Non-metallic mineral products	-50.74	-75.23	4.05	34.33
11.	Basic metal and alloys industries	- 5.88	-71.00	14.08	3.53
12.	Metal products	109.40	-74.44	2.60	130.00
13.	Non-electrical machinery	-7.36	-77.50	10.00	-21.15
14.	Electrical machinery	83.50	-80.60	10.45	- 9.43
15.	Transport equipments and parts	42.23	-81.52	8.11	-42.62
16.	Other manufacturing industries	511.11	-78.31	17.91	-5.77
	Overall	-25.20	-72.19	13.11	20.55

Note :E/O= Indicates the requirement of employees to produce Rs.1 lakh worth of output.

M/O= Indicates the requirement of material cost to produce Re.1 worth of output.

C/O= Indicates the requirement of productive capital to produce Re.1 worth of output.

Source: H.L. Chandhok and Policy Group, India Data Base : The Economy, Vol. II, New Delhi, 1990, Central Statistical Organization, Department of Statistics, Ministry of Planning, Government of India, Statistical Abstract, Various issues.

efficiency and the capital intensity is negative, whereas, statistically non-significant between export efficiency and remaining variables. In 1984-85, the export efficiency shows the positive relationship with material intensity, where as, with other variables it has been found to be statistically nonsignificant. It may be mentioned that correlation between internal export efficiency and the employment intensity has been found to be statistically nonsignificant. In 1994-95, correlation between internal export efficiency and employment intensity has been found to be positive, whereas, correlation between employment intensity with material and capital intensity is found to be negative (Table-5).

Further, a number of regression models has also been fitted to describe the relationship betwee internal export efficiency and explanatory variables. Table - 6 portrays the results of regression model fitted in simple linear form to explain the internal export efficiency on account of employment intensity, material intensity and capital intensity $(y_1 = a_1 + b_1 x_1 + b_2 x_2 + b_3 x_3 + U)$. Statistically reliable regression coefficient for the year 1984-85 shows the inverse relationship between the internal export efficiency and employment intensity. It would imply that improved efficiency has partly been due to the fall in employment intensity and vice-versa. However, regression coefficients and R^2 for remaining years have been found to be statistically nonsignificant (Table-6).

Table - 5 : Correlation Coefficients Between Share of Export with Employment Intensity, Material Intensity and Capital Intensity In India Over Different Points of Time

Export Share Factor intensity	Correlation Coefficients			
	Share of exports	Employment intensity	Material intensity	Capital intensity

28301

A - 1970-71

Export Share Factor intensity	Share of exports	Employment intensity	Material intensity	Capital intensity
Share of Exports	1.0000	-0.0605	0.5457**	-0.5496**
Employment intensity	-0.0605	1.0000	-0.1457	-0.1548
Material intensity	0.5457**	-0.1475	1.0000	-0.6383*
Capital intensity	-0.5496**	-0.1548	-0.6383*	1.0000

B - 1980-81

Export Share Factor intensity	Share of exports	Employment intensity	Material intensity	Capital intensity
Share of exports	1.0000	0.0409	0.2687	-0.4094***
Employment intensity	0.0409	1.0000	-0.5120**	-0.3501
Material intensity	0.2687	-0.5120**	1.0000	-0.3565
Capital intensity	-0.4094***	-0.3501	-0.3565	1.0000

C - 1984-85

Export Share Factor intensity	Share of exports	Employment intensity	Material intensity	Capital intensity
Share of exports	1.0000	-0.3401	0.5478**	-0.2282
Employment intensity	-0.3401	1.0000	-0.2671	-0.5186**
Material intensity	0.5478**	-0.2671	1.0000	-0.3466
Capital intensity	-0.2282	-0.5186**	-0.3466	1.0000

D - 1994-95

Export Share Factor intensity	Share of exports	Employment intensity	Material intensity	Capital intensity
Share of exports	1.0000	0.4537***	-0.1866	-0.3763
Employment intensity	0.4537**	1.0000	-0.5703**	-0.4256***
Material intensity	-0.1866	-0.5703**	1.0000	-0.0339
Capital intensity	-0.3763	-0.4256***	-0.0339	1.0000

Note : * Indicates significant at 1 per cent level.
** Indicates significant at 5 per cent level.
*** Indicates significant at 10 per cent level.

Source : H.L. Chandhok and Policy Group, India Data Base : The Economy, Vol.II, New Delhi, 1990, Central Statistical Organization, Department of Statistics, Ministry of Planning, Government of India, Statistical Abstract, Various issues.

Table - 6 :   Determination of Share of 16 Export Commodities
in India : 1970-81, 1980-81, 1984-85 and 1994-95

Regression Equation : $y_1 = a_1 + b_1x_1 + b_2x_2 + b_3x_3 + U$

Year	Constant term (a_1)	Independent Variables			$R^2 =$ Values	F=Statistics
		Employment intensity (X_1)	Material intensity (X_2)	Capital intensity (X_3)		
1970-71	-1.01	-0.28 (-0.30)	22.53 (0.95)	-10.45 (-1.18)	0.37	2.35
1980-81	6.07	-0.24 (-0.08)	7.81 (0.29)	-12.05 (-1.01)	0.19	0.94
1984-85	3.90	-5.52*** (-1.39)	18.29 (1.08)	-10.23 (-1.07)	0.40***	2.67
1994-95	3.28	13.15 (0.98)	2.71 (0.05)	-7.11 (-0.70)	0.25	1.20

Note   : Figures under paranthesis denote 't' values

y_1 = Indicates percentage of exports of principal
commodities of the total India's exports.

a_1 = Indicates constant term.

X_1 = Indicates requirement of employees to produce
Rs. one lakh worth of output.

X_2 = Indicates requirement of material cost to produce
one rupee worth of output.

X_3 = Indicates requirement of productive capital to
produce one rupee worth of output.

*** Indicates significant at 10 per cent level.

Since regression results for 1970-71, 1980-81 and 1994-95 were found to be statistically nonsignificant, we employed different forms of regression models, explaining dependent variable with only one independent variable. Table - 7 portrays the regression results for 1970-71, 1980-81, 1984-85 and 1994-95. In 1970-71 and 1980-81, statistically reliable results show the inverse relationship between the internal export efficiency and capital intensity. In 1984-85, a similar has also been the case between export efficiency and the employment intensity. In 1994-95, a positive relationship has been postulated between internal export efficiency and employment intensity, whereas, inverse relationship between internal export efficiency and the capital intensity. Contrary to above, a positive relationship has been postulated between internal export efficiency and material intensity in 1970-71 and 1984-85. It implies that improvement in internal export efficiency in India in 1970-71 has partly been the outcome of low capital intensity and high material intensity; in 1980-81, low capital intensity alone; in 1984-85, low employment intensity but high material intensity; and that in 1994-95, high employment intensity and low capital intensity (Table-7).

Table-7 : <u>Export Share Function by Commodities in India : 1970-71,</u>
<u>1980-81, 1984-85 and 1994-95</u>

		Independent Variables					
Year	Constant term	Employment intensity	Material intensity	Capital intensity	T = Values	R^2 Values	F= statistics
	(a_1)	(X_1)	(M_1)	C_1			

A — <u>Regression Equation</u> $y_1 = a_1 + b_1 x_1 + U$

1970-71	6.50	-0.23	—	—	-0.23	0.004	0.06
1980-81	4.43	0.31	—	—	0.15	0.002	0.03
1984-85	9.08	-4.30***	—	—	-1.35	0.12	1.91
1994-95	0.82	16.08**	—	—	1.84	0.21***	3.36

B — <u>Regression Equation</u> $y_1 = a_1 + b_1 m_1 + U$

1970-71	-20.13	—	41.22**	—	2.44	0.30**	6.00
1980-81	-5.56	—	17.77	—	1.04	0.07	1.06
1984-85	-14.57	—	32.25**	—	2.45	0.30**	6.00
1994-95	27.92	—	-28.77	—	-0.68	0.03	0.47

C — <u>Regression Equation</u> $y_1 = a_1 + b_1 c_1 + U$

1970-71	14.98	—	—	-15.50**	2.46	0.30**	6.00
1980-81	10.75	—	—	-13.04**	-1.68	0.17***	2.87
1984-85	8.22	—	—	-6.72	-0.88	0.05	0.74
1994-95	11.88	—	—	-12.28***	-1.46	0.14	2.14

Note: y_1 = Indicates percentage of exports of principal commodities
of India's total exports.
a_1 = Indicates constant term.
X_1 = Indicates employment intensity (i.e., E/O in Rs. lakhs).
m_1 = Indicates material intensity (i.e., M/O is Rs.)
C_1 = Indiates capital intesntiy (i.e., C/O in Rs.)

** Indicates significant at 5 per cent level.
*** Indicates significant at 10 per cent level.

Source : H.L. Chandhok and Policy Group, <u>India Data Base : The</u>
<u>Economy</u>, Vol.II, New Delhi, 1990, Central Statistical
Organization, Department of Statistics, Ministry of
Planning, Government of India, <u>Statistical Abstract</u>, Various
issues.

IV. Policy Measures and Internal Export Efficiency

Above analyses provides only a partial explanation for India's internal export efficiency, which needs to be corroborated by other determining factors as well. Here, the influence of export promoting measures merits special consideration.   It may, however, be mentioned that the role of such measures is highly erratic, which not only fluctuates on yearly but also even on quarterly and monthly basis, which makes its measurement a rather difficult task in a quantitative precision. Notwithstanding, an attempt has been made to examine empirically the influence of few but selective policy measures, such as, Cash Compensatory Support (CCS) Import Replenishment Licences (REP) and Duty Draw Back offered by Indian government for exporters.

IV.1 Cash Compensatory Support and Import
Replenishment Licences

It may be recapitulated that India's export efficiency measured in terms of percentage share of export in India's export basket deteriorated from the period 1969-72 to 1984-87 in most of the traditional commodities, whereas, improved in almost all non-traditional commodities.   Specifically, percentage share of export in food and live animals (0.0) declined from 27.02 per cent in 1969-72 to 22.34 per cent in 1984-87; beverages and tobacco (1.0) 2.83 per cent to 1.50 per cent; crude materials inedible except fuels (2.0)

15.27 per cent to 9.52 per cent; animal vegetable oils and fats (4.0) 0.43 per cent to 0.26 per cent; and in manufactured goods classified by materials (6.0) 42.12 per cent to 36.37 per cent. On the contrary, in non-traditional product categories, it increased from 1.59 per cent to 3.91 per cent in chemicals (5.0); 4.96 per cent to 6.71 per cent in machinery and transport equipment (7.0); and 5.20 per cent to 15.70 per cent in miscellaneous manufactured articles (8.0). Thus, it is useful to examine as to how far the internal export efficiency/inefficiency in export-commodities is accountable to the influence of policy measures.

Table - 8 summarises the cash compensatory support (CCS) (effective from 1-4-1989 to 31-3-1992) and Import Replenishment licences (effective from 1-4-1990 to 31-3-1993) by broad commodity groups. The average CCS rate of FOB export has been found to be higher on non-traditional goods like engineering goods (10.08 per cent) and miscellaneous manufacturing articles (7.37 per cent) than that on agricultural products, processed food items, etc (8.70 per cent). However, average CCS rate was lowest in chemicals, being 7.70 per cent. Similarly, REP rate of FOB exports, was higher on engineering goods (17.52 per cent), miscellaneous manufactured articles (16.54 per cent) and chemicals (15.36 per cent), which was far higher than that on agricultural products, processed food, etc. (12.42 per cent).

Among the non-traditional sector, bicycles (new models) received 18 per cent of CCS of FOB value; steel welding

Table – 8 : <u>Cash Compensatory Support and Import Replenishment Licences in India
By Broad Export Commodity Groupings</u>

Commodity groups	CCS		REP	
	Number of products	Average CCS as per cent of FOB value (effective from 1-4-1989 to 31-3-1992)	Number of products	Average of REP as per cent of FOB value provided to exporters (effective from 1-4-1990 to 31-3-1993)
A – Engineering goods	102	10.08	120	17.52
B – Chemicals	110	7.70	65	15.36
C – Agricultural products, processed food items, marine products, etc.	56	8.70	59	12.42
D – Miscellaneous manufacturing items	50	9.67	42	16.54
Overall	318	9.58	286	16.35

Source : Kumari, A., <u>Export Incentives</u>, Volume – I, Anupam Publishers, New Delhi,1991

machinery 15 per cent; motor vehicles 20 per cent; tractors 15 per cent; air conditioning, refrigeration, humidification and ventilation equipment 15 per cent; steel castings 15 per cent; steel forgings all types (including carbon/alloy/ stainless steel) 20 per cent; and ferro alloys 15 per cent. REP of FOB value has also been higher on electric fans 20 per cent; inlet and exhaust valves for reciprocating engines and compressors 20 per cent; diesel engines and gas engines 20 per cent; motor vehicles, tractors, motor cycles, scooters, mopeds, 20 per cent; steel trunks, pressure cooker 15 per cent; and electric lamps all sorts 20 per cent. Generally, REP varied from 15 per cent to 20 per cent in engineering goods.[1]

Within the miscellaneous manufacturing articles, the CSS and REP varied by commodities. CSS rate was 20 per cent on footwear; 12 per cent on wool worsted fabrics; 13 per cent on woolen hoisery knitwear; 14 percent on natural silk fabrics; 13 per cent on natural silk garments; 10 per cent on all items of handi crafts; and 15 per cent on hand knotted silk carpets and rugs and hand knotted art silk/synthetic carpets. The CSS rate varied from 5 per cent to 20 per cent. A similar was also the case for REP. Plastic imitation jewellery, plastic bangles, writing instruments and parts, cushioned vinyl flooring and finished leather including sole

---

1. Tiwari, R.S., Trade Cooperation Among Selected Newly Industrializing Developing Countries : Principles and Policy Options, Mimeo., GIDS, 1996, pp.319-320.

leather which received 15 per cent of REP, while footwear components, leather garments, shoddy/woolen blankets, wollen hoisery knitwears, natural silk fabrics, man made fibre garments, hand knotted silk carpets and rugs and hand knotted art silk/synthetic carpets 20 per cent of REP to FOB value of exports.[1]

On the other hand, average rate of CCS was lowest in chemical products under non-traditional sector, but was marginally higher than to that on products under traditional sector. For example, CCS rate on aluminium powder and paste was 5 per cent; crome pigments 10 per cent; organic pigments 10 per cent; synthetic detergent powder 5 per cent; drugs and drug intermediates 15 per cent; insecticides, pesticides 5 per cent; paints, varnishes 12 per cent; sodium sulphate 5 per cent; red phosphorous and phosphorous trichloride 8 per cent; thionyle chloride 5 per cent; potassium carborate 5 per cent; caustic potash flokes 5 per cent; triethylamine 5 per cent; melamine 5 per cent; enthyle alcohol 10 per cent; phenol 8 per cent; acetone 8 per cent; diethylenetriamine (DETA) 8 per cent; hydrogen paroxide 5 per cent, etc. Generally, CCS was lowest in chemicals, which varied from 5 per cent to 15 per cent. REP rate was found to be higher than the CCS rate in chemical products. For instance, REP in aluminium powder and paste, chrome pigment, sodium cyanide, boric acid, abrasive lapping power and face creams/cold was

---

1. Op.cit., pp.320-321.

found to be 15 per cent; dys and dye intermediates, insecticides, pesticides and paints, varnishes 20 per cent; medicinal plants, herbs, crude drugs 10 per cent; and hair oil 10 per cent . Generally, REP rate ranged between 10 to 20 per cent to FOB value of export.[1]

In case of traditional commodities, the average rate of CCS was found to be 8.70 per cent, which was not only lower than the engineering goods of 10.08 per cent and miscellaneous manufactured articles of 9.67 per cent but than to the average of all products of 9.58 per cent. For instance, canned marine products received CSS of 8 per cent; freeze dried marine products 10 per cent; hatching eggs 5 per cent; day cold live chicks 15 per cent; curry powder in bulk, spices, oils, biscuits, mango pulp and concentrates, instant coffee, packets tea, tea caddles and bags 10 per cent, and canned vegetables and frozen/fresh chilled meat and pickles and chutneys 15 per cent. Similarly, coca beans and canned meat received CCS of 10 per cent and 20 per cent respectively. The CSS thus ranged from lowest 5 per cent to highest 20 per cent, while REP 10 per cent to 20 per cent of FOB value of exports.[2]

---

1. Tiwari, R.S., op.cit., pp.320-321.

2. Ibid., p.322.

IV.2   Duty Draw Back

To assess the impact of duty draw back on India's export commodities, we faced enormous difficulties on account of data limitation. Duty draw back was expressed in different units for different commodities. This forced us to restrict this part of analysis on those commodities, whose duty draw back facility was available on uniform basis. Thus, duty draw back by commodities expressed only in percentage term of FOB value was considered alone. Therefore, present exercise is only a rough indicator about the impact of duty draw back on Indian export-commodities. Considering this limitation, we may now discuss here below the impact of duty draw back by major non-traditional and traditional commodities.

Rate of duty draw back provided to exporters as on 1-4-1991 (Table-9) is found to be higher on engineering goods (8.94 per cent) than on miscellaneous manufacturing articles (6.02 per cent) and that on chemicals (5.80 per cent). Among the engineering sector, brass art ware and electro plated received duty draw back of 27 per cent; nickle silver 23 per cent; kerosene burning made of brass 27.40 per cent; pressure lamps/lanterns 18 per cent; blow lamps 22 per cent; pressure cooker 7 per cent; machine tools and accessories 5 per cent; power generating machinery, parts there of 6.50 per cent; textile machinery parts thereof 7.23 per cent; electrical power machinery 12 per cent; telecommunication equipments and parts 12 per cent; electric fans all sorts 3 per cent;

Table — 9 : <u>Duty Draw Back in India by Broad Export-Commodity Groups</u>

Commodity groups	Number of products	Average rate of duty draw back as percentage to FOB Value of exports (effective as on 1-4-1991)
A. Engineering goods including stainless steel products and metal artware	77	8.94
B. Chemicals and allied products	10	5.80
C. Miscellaneous manufacturing articles	64	6.02
Overall	151	7.49

Source : Kumari, A., <u>Export Incentives</u>, Volume II, Anupam Publishers, New Delhi, 1991

bicycles, assembled or unassembled 9 per cent; rims and caliper bracks 19 per cent; hubs, handle bars, chains and wheels 15 per cent; passanger cars 10 per cent; passanger busses 6 per cent; trucks/load vehicles 4 per cent; jeeps 4 per cent; scooters (two wheeled/motor vehicles) 5 per cent; auto rickshaw and other similar 3 wheeled motor vehicles with or without body 6 per cent, etc. Thus, duty draw back varied from lowest of 2 per cent to highest of 27 per cent in accordance to the nature of engineering commodities.

With in the miscellaneous manufcturing group, all ceramic cartridges received 35 per cent of duty draw back; all magnetic cartridges and magnetic stylus 25 per cent; all leather goods including travel goods 4 per cent; harness 9 per cent; leather gloves 5 per cent; bags, wallets and purses 8 per cent; leather shoes 6 per cent; cricket/hockey balls and other cork balls 5 per cent; hockey sticks 5 per cent; carrom board 6 per cent; handloom/power loom lungies 10 per cent; bed sheets, bed covers, guilt covers/counter and panes/pillow cases 4 per cent; cotton bags 4 per cent; cotton gloves 2 per cent; ready made garments all sorts 8 per cent, etc. More or less, the rate of duty draw back fluctuated from 2 per cent to 35 per cent.[1]

The influence of duty draw back has, however, not been found of vital significance explaining the export efficiency of chemical products. For instance, drugs and pharmaceuticals received duty drawback of 4 per cent; synthetic organic dye stuffs, dyes intermediates, pigment dye stuffs and colour lakes 10 per cent; other whitening agents 8 per cent; perfumed agarbatties 13 per cent; insecticides/pesticides 3 per cent, etc. Thus, the rate of duty draw back varied from 2 per cent to 13 per cent on products under chemicals.[2]

---

1. Tiwari, R.S., op.cit., p.325.

2. Ibid., p.325-326.

General findings thus, suggest that internal export efficiency in engineering and miscellaneous manufactured commodities has partly been the result of high CCS, REP and duty draw back, whereas, that in chemicals due partly to the REP of the FOB value of exports. In contrast to this, the export inefficiency in traditional products (agricultural goods etc.) appears partly as an outcome of lower rate of CCS and REP.

V. Exports from India and Selected Newly Industrializing Developing Countries : Constraint and Potential

We may now examine empirically the demand of India's export in the world market. The export demand function worked out by the present author elsewhere has been presented herebelow to elicit the role of price and income factors on India's export performance from 1961 to 1994.

$$\text{Log } y_1 = 13.38 - \underset{(-3.65)*}{1.27 \text{ Log } X_1} - \underset{(-1.75)**}{0.72 \text{ Log } X_2} - \underset{(-6.58)*}{0.56 \text{ } X_3}$$

$$R^2 = 0.83* \quad F = \text{Value} = 304.33$$

* Indicates significant at 1 per cent level.

** Indicates significant at 5 per cent level.

Note:

y_1 = Indicates quantum indices of India's export at 1980-81 = 100

x_1 = Indicates relative prices in US \$ at 1980-81 = 100

X_2 = Indicates indices of GDP of 15 major import-
markets at 1980-81 = 100

X_3 = Dummy variable '0' from 1961 to 1980 and '1' from
1981 to 1994.

A close examination of the results suggests that an increase by one per cent in price of India's exports would result into fall of her export by 1.27 per cent, where as, increase in GDP of 15 import-markets would lead to a fall of India's exports by 0.72 per cent. Thus, India's export is elastic with respect to price, where as, inelastic with respect to income of the consumers.

It appears that external demand is a basic constraint for India's exports, which is primarily the outcome of poor quality of export-goods and the tariff and non-tariff barriers. So as to understand the export market potential from selected NICs, the import elasticity has further been worked out in relation to per capita GNP. The import elasticity has been worked out by using the following method:

$$\frac{Q_t - Q_o}{Q_t + Q_o} \div \frac{G_t - G_o}{G_t + G_o}$$

where,

Q_t = Indicates value of imports in mill. US $ during terminal year.

Q_o = Indicates value of imports in mill. US $ during base year.

G_t = Indicates the value of per capita GNP in US $ during terminal year.

G_o = Indicates the value of per capita GNP in US $ during base year.

Import elasticity has been worked out in Table-V.10 during the period 1981-91 and 1991-95 for (1) developed and (2) developing countries. The latter group is further bifercated into: (1) Sub-Saharan Africa, (2) South-Asia, (3) East-Asia and Pacific, (4) Latin America and Caribbean, (5) Middle-East and North-Africa and (6) Europe and Mediterranean. Analysis of table-V.10 portrays that during 1981-91, import elasticity (i.e., import with respect to per capita GNP) is inelastic in various country groups with exception of South-Asia, which shows elastic import demand of 5.82 per cent. The import elasticity is found to be inelastic, being less than 0.5 in developed countries (DMEs), Middle-East and North-Africa. It implies the lack of responsiveness in demand for import due to change in the per capita GNP. As compared to above, the import demand elasticity has been found to be relatively higher in Sub-Saharan Africa, Latin America and Caribbean, Europe and Mediterranean and East Asia and Pacific Countries.

During 1991-95, import elasticity is only found to be elastic in Sub-Saharan Africa, whereas, inelastic in remaining groups of countries. South-Asia is placed better in terms of import market potential than the rest, because she has a relatively higher import elasticity than the other

Table-10 : <u>Elasticities of Import Demand in Developed and</u>
<u>Developing Countries : 1981-1991 and 1991-1995</u>

Country Groups	Import Elasticity	
	1981-91	1991-95
A - <u>Developed Countries</u>	0.3640	0.9526
B - <u>Developing Countries</u> of which:	0.6340	-0.0408
1. Sub-Saharan Africa	0.8141	1.6821
2. South-Asia	5.8190	0.7859
3. East Asia and Pacific	0.6421	0.2890
4. Latin America and Caribbean	0.8489	0.2356
5. Middle East and North Africa	0.3689	0.3789
6. Europe and Mediterranean	0.6930	0.1699

Basic Source : World Bank, <u>World Tables</u>, Various issues.

groups of countries. The general findings thus suggest that, during 1981-91, potential for enhancing export from NICs is relatively better in developing (0.6340) than that in the developed countries (0.3640). During 1991-95, all groups of developing countries, excepting Sub-Saharan Africa, show the low import demand potential. Thus, despite high unfavourable trading environment, developed countries still possess a great import potential for the export from NICs.

Table - 11 : <u>Elasticities of Import Demand of Each NICs into Rest</u>
<u>of NICs : 1981-1991 and 1991-95</u>

Sl. No.	NICs	Import Elasticities		NICs
		1981-1991	1991-1995	
1.	Argentina	0.4936	4.8236	Brazil, India, Israel, Korea Republic, Malaysia, Pakistan, Singapore and Turkey.
2.	Brazil	0.0348	0.8433	Argentina, India, Israel, Korea Republic, Malaysia, Pakistan, Singapore and Turkey.
3.	India	0.4366	1.0623	Argentina, Brazil, Israel, Korea Republic, Malaysia, Pakistan, Singapore and Turkey.
4.	Israel	0.3521	1.0421	Argentina, Brazil, India, Korea Republic, Malaysia, Pakistan, Singapore and Turkey.
5.	Korea Republic	0.4486	1.4420	Argentina, Brazil, India, Israel, Malaysia, Pakistan, Singapore and Turkey.
6.	Malaysia	0.4381	1.0830	Argentina, Brazil, India, Israel, Korea Republic, Pakistan, Singapore and Turkey.
7.	Pakistan	0.4306	1.0621	Argentina, Brazil, India, Israel, Korea Republic, Malaysia, Singapore and Turkey.
8.	Singapore	0.3251	0.9221	Argentina, Brazil, India, Israel, Korea Republic, Malaysia, Pakistan and Turkey.
9.	Turkey	0.4231	1.1820	Argentina, Brazil, India, Israel, Korea Republic, Malaysia, Pakistan and Singapore.

Basic Source : World Bank, <u>World Tables</u>, Various issues.

Analysis, per-se, based on the country groups, does not reveal the export market potential among the individual NICs. To fill this gap, import elasticity of 8 NICs has been worked out vis-a-vis the individual NICs during the period 1981-91 and 1991-95. It would, roughly indicate the import demand potential for individual NICs into the rest of NICs. The result presented in Table - 11 shows that import demand in individual NICs, during 1981-91, is inelastic into all NICs. During the latter period (1991-95), the import elasticity for most of NICs, excepting Brazil and Singapore, has been found to be highly elastic into rest of NICs. Thus, there appears to be a high import market potential for the exports from developing countries and NICs into the developed countries and the NICs themselves.

VI. Concluding Remarks

Thus, present empirical exercise portrayed the poor performance record of India's export vis-a-vis the most of NICs. This was found true from 1971 to 1992, yet some qualitative improvements were recorded from 1981 to 1992. Such observed phenomenon was found partly on account of cost conditions of production and partly to the role of trade regime, which in part was considered as determinants of India's internal export efficiency. It was revealed that India's internal export efficiency in some of non-traditional products had been on account of country's comparative labour

cost advantages, whereas, fall in export efficiency in some of traditional items to the comparative material cost disadvantages. The results of the simple and multiple regression models also confirmed the labour cost differences as a critical factor for India's export efficiency/ inefficiency.

Besides above, certain export promoting measures (CCS, REP and Duty Draw back) were also found as contributory factor for India's internal export efficiency particularly in non-traditional goods (engineering goods and miscellaneous manufacturing items). On the contrary, fall in export efficiency in case of agricultural products, food, etc. was seen explained by the ineffectiveness of export promoting measures. In chemicals, the improvement in export efficieny was found mainly owing to the REP provided on the FOB value of exports.

To what extent India's and of each NIC's exports were able to capture the world market and that of other NICs has also been examined. It is generally found that exports from India and that from individual NICs have been affected more intensively in the developing than that in the developed market economies. It would imply that, developed countries, in spite of unfavourable trading environment, still possess a relatively high import potential for the exports from NICs. Also, import demand potential in most of NICs from individual NICs has also been found to be high and encouraging.